Claims

1. An encoding apparatus for executing an encoding process with an encoding system capable of treating at least B-pictures as pictures to be prediction-encoded, the encoding apparatus comprising:

timing calculation means for, anticipating that a plurality of encoded information created by performing the encoding process will be sequentially decoded on a decoding side, calculating output timing for results of decoding the encoded information; and

timing notification means for notifying said decoding side of output timing calculated by said timing calculation means before a result of decoding corresponding encoded information is obtained.

2. The encoding apparatus according to Claim 1, wherein

said timing calculation means calculates the output timing for the results of decoding the encoded information so as to immediately output a result of decoding encoded information having a longest period of time out of periods of time after the encoding process is started until encoded information is outputted.

3. An encoding method of executing an encoding process with an encoding system capable of treating at least B-pictures as

pictures to be prediction-encoded, said encoding method comprising:

a first step of, anticipating that a plurality of encoded information created by performing said encoding process are sequentially decoded on a decoding side, calculating output timing for results of decoding the encoded information; and

a second step of notifying said decoding side of output timing calculated in said first step before a result of decoding corresponding encoded information is obtained.

4. The encoding method according to Claim 3, wherein,

in said first step, the output timing for the results of decoding the encoded information are calculated so as to immediately output a result of decoding encoded information having a longest period of time out of periods of time after the encoding process is started until encoded information is outputted.

5. A decoding apparatus for executing a decoding process on a plurality of encoded information encoded with an encoding system capable of at least B-pictures as pictures to be prediction-encoded, said decoding apparatus comprising:

storage means for temporarily storing restored image information sequentially created by the decoding process; and

output control means for controlling output of the restored

image information stored in said storage means, wherein

said output control means, when restored image information to be stored in said storage means is failed, re-outputs restored image information outputted just before the failure.

6. The decoding apparatus according to Claim 5, wherein:

said storage means temporarily stores each piece of the encoded information as well; and

said output control means ignores a decoding start time set for first encoded information stored in said storage means, immediately starts decoding of the first encoded information and, when a failure occurs, offsets a lag from the decoding start time occurred due to the ignorance, by re-outputting restored image information outputted just before the failure.

7. The decoding apparatus according to Claim 5, wherein:

said storage means temporarily stores each piece of the encoded information; and

said output control means, when a storing order of encoded information being stored in said storage means is different from an order before the encoding, re-outputs restored image information corresponding to the encoded information having a different order.

8. A decoding method for executing a decoding process on a

plurality of encoded information encoded with an encoding system capable of at least B-pictures as pictures to be prediction-encoded, said decoding method comprising:

a first step of temporarily storing restored image information successively created by the decoding process;

a second step of outputting the restored image information to be stored; and

a third step of, when restored image information to be stored is failed, re-outputting restored image information outputted just before the failure.

9. The decoding apparatus according to Claim 8, wherein,

said first step includes a decoding start step of temporarily storing each piece of the encoded information before the decoding process, and of ignoring a decoding starting time set for first encoded information stored and immediately starting decoding of the first encoded information; and

said third step, when the failure occurs, offsets a lag from the decoding start time occurred because the decoding start step starts the decoding regardless of the decoding start time, by re-outputting restored image information outputted just before the failure.

10. The decoding method according to Claim 8, wherein

said first step includes a judgement step of temporarily

stores each piece of the encoded information before the decoding process, and of judging whether a storing order of each piece of the encoded information stored is different from an order before the encoding process; and

said third step, when a judgement result indicative of difference is obtained by said judgement step, re-outputs restored image information corresponding to encoded information having a different order.